REMARKS

Reconsideration and allowance of this application are respectfully requested. Claims 10-12, and 14-15 remain in this application and, as amended herein, are submitted for the Examiner's reconsideration.

A petition for a three-month extension of the term for response to said Official Action, to and including May 20, 2003, is transmitted herewith.

In the Office Action, the Examiner rejected claims 10-12, 14 and 15 under 35 U.S.C. § 102(e) as being anticipated by Kirloskar (U.S. Patent No. 6,221,749). However, the Kirloskar patent is not prior art.

The Kirloskar patent issued from a patent application filed on August 31, 1999. By contrast, the present application is a divisional of U.S. Application No. 09/428,158, filed October 27, 1999, which claims the benefit of priority from U.S. Provisional Application No. 60/106,055 which was filed on October 28, 1998 and which discloses the subject matter called for in the claims. Therefore, the priority date of the present application precedes the filing date of the Kirloskar patent.

Accordingly, Kirloskar may not be relied upon in rejecting the claims of the present application.

The Examiner also rejected claims 12 and 14 under 35 U.S.C. § 102(b) as being anticipated by Matsumoto (U.S. Patent No. 4,893,172). It is submitted, however, that the claims are patentably distinguishable over Matsumoto.

The Matsumoto patent shows, in FIGS. 1(a)-(c), conductive flat, spiral springs or lead members 1 in which the center terminal of the spiral spring is connected to the chip electrode 32 and the other end of the spiral spring is connected to a substrate electrode 42. The spiral structure enables the chip and substrate to move separately from one another within a

certain range while maintaining an electrical connection. (See column 3, lines 31-58.)

The Examiner contends:

> Both of the leads (1) of figures 1a and 1b have two substantially flat main surfaces. Both of the leads (1) have a first main surface which faces the body and a second main surface which faces away from the body. ... The highest top surface of the lead (1) has been interpreted to be the first portion or tip end. Each lead (1) has a first portion or tip end which is separated from the front surface at a first distance. Each lead (1) also has a second portion or pad end which is separated from the front surface at a second distance. The top surface of the lead in contact with the pad has been interpreted to be the second portion or pad end. Thus the first distance is greater than the second distance.

However, FIG. 1(b) of Matsumoto shows lead members 1 having a tip end and a pad end that are *equally distant* from the front surface of the chip. Moreover, though FIG. 1(c) shows the springs or lead members 1 with the tip end at a greater distance from the front surface of the chip than the pad end, the conductive flat springs are depicted after being *deformed* in the vertical direction from their normal shape shown in FIG 1(b). (See column 2, lines 50-52.) FIG. 1(c) does not show the shape of the lead members 1 when the lead members are *free standing*. Thus, Matsumoto does not suggest that the tip end of the lead members is at a greater distance from the front than the tip end when the lead members are free standing.

Claim 12 has been amended to emphasize this difference. Support for this change is shown in FIG. 10 of the specification.

Therefore, Matsumoto does not suggest:

> flexible leads having pad ends and tip ends, said pad ends of said flexible leads being connected to said pads, said tip ends of at least some of said flexible leads projecting over said front surface of said body, at least some of said flexible leads being

> spaced apart from said front surface, said tip ends of said flexible leads being independently movable with respect to said body, each of said at least some of said flexible leads including an elongated, strip-like main region having substantially flat main surfaces, a first main surface facing toward said body, a second main surface facing away from said body, each said elongated, strip-like main region having a first portion spaced apart from said front surface by a first distance and a second portion spaced apart from said front surface by a second distance, said first distance being greater than said second distance at least when said flexible leads are free standing, said first portion comprising said tip end and said second portion comprising said pad end.

as called for in claim 12.

Claim 14 depends from claim 12 and further defines and limits the invention set out in the independent claim as well as calls for additional limitations. It follows that claim 14 likewise defines a combination that is patentably distinguishable over Matsumoto.

Accordingly, the withdrawal of rejection of claims 12 and 14 under 35 U.S.C. § 102 is respectfully requested.

Additionally, claims 10 and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Dozier (U.S. Patent No. 5,772,451) in view of Khandros (U.S. Patent No. 5,148,266). It is submitted, however, that the claims are patentably distinguishable over the references.

The Dozier patent illustrates, in FIG. 2C, a device 230 with a plurality of wire core interconnection elements 231, ..., 236 mounted on the surface of an electronic component 240. The free ends or tips of the interconnection elements may be used to contact the bond pads of a semiconductor device (not shown). (See column 18, lines 2-24.)

The Khandros patent describes, inter alia, an interposer disposed between a chip and a substrate. In the embodiment relied upon by the Examiner, contacts on the chip are

connected to terminals on the interposer by leads extending through apertures in the interposer. In FIG. 2, Khandros shows an interposer 42 with leads 50 curved between its contact end 56 and its terminal end 58 in a direction *perpendicular to* the faces 46 and 48 of the interposer. In FIG. 12, Khandros shows an interposer 242 with terminals 248 and leads 250 in which the leads 250 are curved in directions *parallel to* the face 246 of the interposer 242 and parallel to the plane of the front face 238 of the chip. (See column 7, lines 34-48; and column 13, lines 22-35.)

The Examiner contends that it would be obvious to curve the leads shown in FIG. 2C of Dozier in the manner described in Khandros. However, the wire core used for wire bond interconnections is fed from a wire bonding head that does not configure the wire bond interconnections in a plane parallel to the surface of the chip. Rather, the bonding head bends the wire core *away from* the surface of a chip, such as is shown in FIG. 2C, before a portion of the wire core is detached from the bounding head. The Examiner thus has failed to show any teaching in the art that shows that Dozier's wire core elements of FIG. 2C could readily be curved in a plane above the surface of a chip.

The Examiner argues that though Dozier describes that the flexible leads in FIG. 2C are wire bond interconnections or wire core elements, the references also describes that the leads are resilient or flexible, and the Examiner further asserts that incentive to modify the wire bonds of Dozier is provided by Dozier in that the reference states that resilient or flexible leads are desirable and useful for applications where the leads must conform to non-planarities of devices to which they are being interconnected. However, the Examiner's argument does not show that Dozier provides an incentive to modify Dozier's wire

core elements. Dozier merely points out that resilient or flexible leads are desirable to attain various objectives, such as for accommodating gross non-planarities in the components that are to be interconnected. (See column 17, lines 5-16.) Dozier then provides various embodiments that attain these goals. Because the objectives of Dozier are already attained by these embodiments, including the embodiment shown in FIG. 2C, there is no incentive in Dozier to further modify the wire core elements.

Moreover, the wire bond interconnections shown in FIG. 2C of Dozier are curved in a direction perpendicular to the surface of the chip. Khandros, which also shows, in FIG. 2, leads that are curved in a direction perpendicular to the faces of the chip, further shows, in FIG. 12, leads that are curved parallel to the surface of the chip. There is no indication in the art that leads curved in a plane parallel to the surface of the chip are more desirable than leads curved in a direction perpendicular to the surface of the chip. Therefore, the Examiner has not shown the presence of any incentive for a person of ordinary skill in the relevant art to modify the orientation of Dozier's wire bond interconnection elements from a direction perpendicular to the surface of the chip to a plane parallel to the surface of the chip.

It follows that the asserted combination of Dozier and Khandros is improper and cannot support the rejection of claims 10 and 11.

Accordingly, the withdrawal of rejection of claims 10-11 under 35 U.S.C. § 103 is respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of

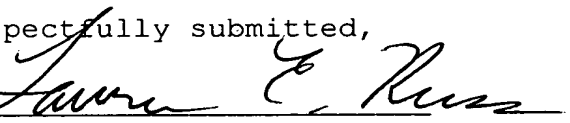
the claims and to pass this application to issue.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that the Examiner telephone applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: May 20, 2003

Respectfully submitted,

By 

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